IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

HEADWATER RESEARCH LLC

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD., SAMSUNG ELECTRONICS AMERICA, INC.,

Defendants.

Case No. 2:24-CV-00228-JRG-RSP

JURY TRIAL DEMANDED

SAMSUNG'S RESPONSIVE CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

The terms "target credential," "wherein the at least one adaptive service policy control agent applies network service policies from a *superset profile* that provides capabilities from each of the first and second service profiles," and "secure modem subsystem" are indefinite. Each of these terms lacks the clear, objective boundaries required by 35 U.S.C. § 112(b), such that POSITA would not know the scope of the claimed inventions with reasonable certainty.

The term "target credential" in the '510 patent is unsupported by the specification and appears only in the claims and abstract, leaving a POSITA without guidance as to what it encompasses. The term "superset profile" in the '055 patent creates irreconcilable ambiguity in the claim language, compounded by a specification that fails to clarify its scope. The term "secure modem subsystem" in the '429 patent lacks any definition or objective criteria specifying what features make the modem subsystem "secure," and what components or structure constitute the "subsystem" itself.

In its opening brief (Dkt. 65), Headwater asserts that Samsung's invalidity positions in its IPR petitions conflict with its indefiniteness arguments here. But that position ignores settled precedent confirming that a claim may be both indefinite and invalid over prior art. Headwater also attempts to rewrite or reinterpret these claims using conclusory assertions and unsupported extrinsic evidence, rather than the intrinsic record.

The Court should hold claim 1 of the '510 patent, claim 8 of the '055 patent, and claim 1 of the '429 patent indefinite.

II. LEGAL STANDARD

"[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572

U.S. 898, 901 (2014). Merely being able to ascribe "*some* meaning" to a patent's claims is insufficient to satisfy the definiteness requirement. *Id.* at 911 (emphasis in original). Courts "should not rewrite claims to preserve validity." *Pfizer Inc. v. Ranbaxy Lab'ys Ltd.*, 457 F.3d 1284, 1292 (Fed. Cir. 2006).

III. BACKGROUND

A. Overview of the '510 Patent

The '510 patent is entitled "Automated credential porting for mobile devices." '510 Pat. at Title. It describes techniques for automatically updating network access credentials for a wireless device (e.g., a mobile phone). *Id.* at 5:10-7:15, 7:34-10:13, 10:14-56, 10:57-12:33. Credentials include, *inter alia*, an international mobile subscriber identity, a phone number, or an internet protocol (IP) address. *Id.* at 5:21-48, 9:59-10:8. Claim 1 recites a wireless device that obtains "an indication of a user request to replace a particular credential . . . with [a] target credential" and, following a series of claimed steps, "store[s], in memory," an "updated credential as the particular credential." *Id.* at cl. 1.

B. Overview of the '055 Patent

The '055 patent is entitled "Automated device provisioning and activation." '055 Pat. at Title. Its Abstract describes "a services policy communication system and method" where the "device stores a set of device credentials for activating the communications device for a service on a network; and sends an access request to the network, the access request including the set of device credentials." *Id.* at Abstract. The '055 patent's claims, however, are directed to "[a] wireless end-user device" that stores a first and second "service profile," each one associated with a different wireless network. *Id.* at cl. 1. "[A] connection manager" selects "an access network connection for the WWAN modem, based on" the selected service profile, and an "adaptive service policy control agent" enforces "network service policies associated with the selected" service

profile. *Id.* These "enforced network service policies" include "policies enforced at an application service interface on network data connections for selected applications resident on the device." *Id.*

C. Overview of the '429 Patent

The '429 patent is directed to techniques for providing secure, policy-based control of services on a wireless end-user device using secure execution environments and partitions. *See, e.g.*, '429 Pat. at Abstract, 3:9-28, 3:39-47, cls. 1 ("enforcing … a network service profile comprising one or more service policy settings"), 8 ("wherein the one or more service policy settings include an access control setting, a traffic control setting, and/or an admission control setting"), 9 ("wherein the one or more service policy settings include a network or device management communication setting."). Claim 1 recites a method of operating a wireless end-user device that includes connecting a secure modem subsystem to a wireless cellular network, establishing first and second secure control channels, and receiving service policy settings from a network service controller. *See id*. at cl. 1. The method further involves storing service policy settings in a secure memory partition and enforcing a network service profile, comprising those settings, to control device use of a service on the wireless cellular network. *Id*. Dependent claims, including claims 3 and 4, add details such as the secure modem subsystem comprising a modem control link, modem local channel, and a modem agent. *See id*. at cls. 3-4. Other dependent claims specify implementation details for the secure execution environment, such as hardware, software, or virtual machine partitions. *See id*. at cls. 10-12.

IV. LEVEL OF ORDINARY SKILL IN THE ART

A POSITA, as of the priority date of the asserted patents, would have had at least a bachelor's degree in electrical engineering, computer engineering, computer science, or equivalent, and at least two years of industry experience in networking security, mobile device communications security, wireless digital communications systems security, and/or wireless

communication network device applications and software. Additional education could compensate for less experience, and vice versa. Notably, Headwater's opening brief is silent on the definition of a POSITA. Dkt. 65.

V. ARGUMENT

A. Samsung's Representations in Its IPR Petitions Do Not Conflict with Its Assertions of Indefiniteness Here

The Court should disregard Headwater's across-the-board criticism that "Samsung's arguments in IPRs undermine its current indefiniteness assertion in district." Dkt. 65 at 7; *see also, e.g.*, *id*. at 1 (similar); 8 (similar); 9 (similar); 11 (same). Courts and the Patent Office both recognize that a claim may be both indefinite and, simultaneously, invalid for lack of novelty or obviousness over the prior art. *See, e.g., Intel Corp. v. Qualcomm Inc.*, 21 F.4th 801, 813 (Fed. Cir. 2021) ("The indefiniteness of a limitation . . . precludes a patentability determination only when the indefiniteness renders it logically impossible for the Board to reach such a decision."); *Samsung Elecs. Am., Inc. v. Prisua Eng'g Corp.*, 948 F.3d 1342, 1355 (Fed. Cir. 2020) (noting that a claim may be invalid for both indefiniteness and section 102 and 103 grounds); *Target Corp. v. Proxicom Wireless, LLC*, IPR2020-00904, Paper 11 at 12 (P.T.A.B. Nov. 10, 2020) ("Petitioner's alternative pleading before a district court is common practice, especially where it concerns issues outside the scope of inter partes review."). Consistent with this settled rule, Samsung demonstrated the claims lack novelty by applying the prior art in a manner consistent with Headwater's infringement allegations, as best understood. This should come as no surprise to Headwater considering Samsung's reservation in its IPR petitions: "[Samsung] is not conceding that each Challenged Claim satisfies all statutory requirements, nor is [Samsung] waiving any arguments concerning indefiniteness or claim scope that can only be raised in district court or otherwise outside the context of an IPR." Dkt. 65-6 at 6 ('510 IPR Pet. 1); Dkt. 65-7 at 6 ('510 IPR Pet. 2);

see also Dkt 65-8 at 3 ('055 IPR Pet.) (similar); Dkt 65-9 at 2 ('429 IPR Pet.) (similar). Accordingly, Headwater's argument is without merit.

B. Extrinsic Evidence Is Not Necessary to Prove Indefiniteness

The Court should similarly disregard Headwater's assertion that Samsung cannot prove indefiniteness without an expert declaration. *See* Dkt. 65 at 1. Courts can, and often do, find indefiniteness without considering any extrinsic evidence such as expert testimony. *See Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370 n.6 (Fed. Cir. 2014) ("[W]e find it unnecessary to rely on [expert] testimony (or any other extrinsic evidence) to reach our conclusion. Like the district court, we find the claims indefinite based on the claims, the written description, and the prosecution history."); *see also Motion Games, LLC v. Nintendo Co.*, No. 6:12-cv-878-JDL, 2015 U.S. Dist. LEXIS 180229, at *9-10 (E.D. Tex. Jan. 16, 2015) (finding that expert evidence was not necessary to decide a motion for summary judgment of indefiniteness); *Prolifiq Software Inc. v. Veeva Sys. Inc.*, No. C 13-03644 SI, 2014 WL 3870016, at *8 n.6 (N.D. Cal. Aug. 6, 2014) ("Although expert testimony is generally helpful in determining whether a claim is indefinite, expert testimony is not always required to make that determination."). After all, intrinsic evidence is "the most important consideration in a claim construction analysis" and often alone will resolve any claim construction disputes. *Medytox, Inc. v. Galderma S.A.*, 71 F.4th 990, 997 (Fed. Cir. 2023); *see UTTO Inc. v. Metrotech Corp.*, 119 F.4th 984, 993 (Fed. Cir. 2024) ("In many cases, claim construction is properly done based on intrinsic evidence alone."). Headwater cites no authority to support its assertion that the Court cannot find the disputed term indefinite without expert testimony from Samsung. *See* Dkt. 65 at 1. Regardless, no such expert testimony was necessary as the indefiniteness of the challenged terms is clear from the intrinsic evidence alone.

C. "target credential" ('510 patent, claim 1)

Headwater's Proposed Construction	Samsung's Proposed Construction
Not indefinite; plain and ordinary meaning	Indefinite

The term "target credential" is indefinite because a POSITA would not understand from the claims or specification what the term specifically refers to and, therefore, a POSITA would not know with reasonable certainty what the "target credential" is. *Nautilus*, 572 U.S. at 901.

1. Headwater's Definition of "Target Credential" Confirms the Claim Language is Inherently Ambiguous and/or Superfluous

Attempting to avoid indefiniteness, Headwater characterizes "target credential" as a 'target' or goal of the user request or wireless request." Dkt. 65 at 6. No such "plain meaning" would be apparent to a POSITA given the context of the claims.

Claim 1 requires, *inter alia*, "obtain[ing] . . . an indication of a user request to replace a particular credential . . . with the *target* credential" and, ultimately, "storing, in memory [an] *updated* credential as the *particular* credential." *See* '510 Pat. at cl. 1 (emphasis added). But if a "target credential" is the "goal" of the user request, as Headwater suggests, the device has already achieved that goal at the outset of the claim when it replaces a particular credential of the device upon an indication of a user request. *See* Dkt. 65 at 6 (defining "target credential" as "a credential stored in memory that replaces a particular credential of the device upon an indication of a user request"). This begs the question, why is any further "updating" necessary?

The superfluous nature of the claim can be seen by substituting Headwater's proposed construction into the claim. As shown below, inserting Headwater's proposed construction into the claim language of section 1.5 renders the language "an indication of a user request to replace a particular credential of the one or more credentials" superfluous. Additionally, step 1.8 of claim

1 of the '510 Patent is nonsensical as Headwater's definition indicates that a "target credential" would always match the particular credential.

Identifier	'510 Patent, Claim 1
[1.pre]	A wireless device, comprising:
[1.1]	memory configured to store:
[1.2]	one or more credentials associated with the wireless device, the one or more credentials for authorizing the wireless device to use a wireless access network to access one or more services, and
[1.3]	[**a credential stored in memory that replaces a particular credential of the device upon an indication of a user request**]
[1.4]	one or more processors configured to execute one or more machine-executable instructions that, when executed by the one or more processors, cause the one or more processors to:
[1.5]	obtain, through the user interface, an indication of a user request to replace a particular credential of the one or more credentials with the [**credential stored in memory that replaces a particular credential of the device upon an indication of a user request**],
[1.6]	detect a network-provisioning state change, and
[1.7]	based on the detected network-provisioning state change, automatically
[1.8]	determine that the particular credential does not match the [**credential stored in memory that replaces a particular credential of the device upon an indication of a user request**],
[1.9]	initiate a programming session with a network element communicatively coupled to the wireless device over the wireless access network,
[1.10]	obtain an updated credential from the network element, and
[1.11]	assist in storing, in memory, the updated credential as the particular credential.

Any proposed construction that renders claim language ambiguous or superfluous should be rejected. *See Wasica Finance GmbH v. Continental Auto. Sys., Inc.*, 853 F.3d 1272, 1288 n.10 (Fed. Cir. 2017) ("It is highly disfavored to construe terms in a way that renders them void, meaningless, or superfluous."); *Mformation Techs., Inc. v. Research in Motion Ltd.*, 764 F.3d 1392, 1399 (Fed. Cir. 2014) (favoring a construction that does not render another limitation

"superfluous"). Headwater's proposed claim construction thus provides no clear boundaries between what constitutes a "credential," a "particular credential," an "updated credential," or a "target credential"–all terms used in the claim 1. Headwater's offered "plain and ordinary meaning" of the term "target credential" confirms the ambiguity fatal to the claim. *Mfg. Res. Int'l, Inc. v. Civiq Smartscapes, LLC*, No. 17-cv-269, 2018 WL 4627661, at *4 (D. Del. Sept. 27, 2018). Headwater's failure to identify a viable definition of "target credential" should be evidence that the claim is indefinite.

2. Lacking Intrinsic Support, Headwater Attempts to Rewrite the Disputed Claim to Try to Avoid Indefiniteness

The patent specification does not resolve the meaning of "target credential." This term appears only in the abstract and claims – nothing in the specification provides the further confines of the term.[1]

With no intrinsic support for the term "target credential," Headwater rewrites the claims by arguing that "target credential" is the same as "requested credential." Dkt. 65 at 6-7. Such an attempt should be rejected. *See K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1364 (Fed. Cir. 1999) ("Courts do not rewrite claims; instead, we give effect to the terms chosen by the patentee."); *PSC Comput. Prods., Inc. v. Foxconn Int'l, Inc.*, 355 F.3d 1353, 1357 (Fed. Cir. 2004) ("Courts can neither broaden nor narrow the claims to give the patentee something different than what he has set forth." (citation omitted)). There is also a presumption that "target credential" and "requested credential" mean different things as they are different terms – a presumption that Headwater does not even address, let alone overcome. *Chicago Bd. Options Exch., Inc. v. Int'l Sec. Exch., LLC*,

[1] To the extent Headwater argues that *Samsung* failed to identify "sufficient intrinsic evidence" to support Samsung's indefiniteness arguments, *see* Dkt. 65 at 1, Headwater's argument is flawed. There is nothing in the intrinsic evidence that describes or defines "target credential," so Samsung has no other intrinsic evidence to cite.

677 F.3d 1361, 1369 (Fed. Cir. 2012) (noting the "general presumption that different terms have different meanings").

Trying to apply boundaries to "target credential," Headwater relies only on Figure 3 of the '510 patent, and its accompanying prose, which refers to a "requested credential." Headwater, however, ignores the remainder of the patent which demonstrates that multiple interpretations of the term are possible. Dkt. 65 at 6-7. For example, the patent says that sometimes a mobile device uses "temporary credentials" during a number porting process ('510 Pat. at 6:45-49) and that, in the prior art, user intervention was required "to update a wireless device using temporary credentials so that the device thereafter uses the intended credentials" (*id.* at 6:58-63). The patent purports to disclose inventions that allow this updating "without user intervention." *See id.* at 7:1-3. This alleged point of novelty suggests that the "target credential" temporarily allows continued service while the ultimate "updated" credential has not yet been retrieved. As another example, Headwater ignores Figure 2 of the '510 patent, which uses yet a different term, "expected credential storage," further confusing what a "target credential" is. *Id.* at Fig. 2; *see also id.* at 10:42-51. A POSITA reading the '510 patent would not understand with reasonable certainty whether a "target credential" is synonymous with "temporary credential," "expected credential," "requested credential," multiple of these terms, or none of them.

3. Headwater's So-Called Extrinsic Evidence Fails to Provide "Target Credential" With the Requisite Reasonable Certainty for a POSITA

Headwater's reliance on evidence from other patents/patent applications[2] fails to provide a POSITA with "reasonable certainty" about the meaning and scope of "target credential."

[2] Headwater identifies these seven patents/patent applications as "extrinsic evidence" in the Joint Claim Construction Chart. *See* Dkt. 65 Ex. 5 at 1. However, the Federal Circuit has held that patents cited on the face of a patent or in an Information Disclosure Statement are intrinsic evidence. *See V-Formation, Inc. v. Benetton Grp. SpA*, 401 F.3d 1307, 1311 (Fed. Cir. 2005).

Headwater briefly asserts, with no citation or explanation, that "the '510 patent uses 'target credential' consistent with patents and patent applications cited on the face of the '510 patent, which repeatedly discuss changing or updating credentials." Dkt. 65 at 7. It is, thus, unclear what disclosures Headwater relies on to assert that a "target credential" would be clear to a POSITA. This is *not* surprising given that those cited patents/patent applications fail to use the term "target credential." It is, thus, befuddling how this evidence unrelated to the '510 patent can provide any guidance or insight on a term that that evidence does not even use. Nothing in the *intrinsic* evidence would, therefore, provide any reasonable certainty to a POSITA as to what a "target credential" is. *Nautilus*, 572 U.S. at 901.

D. "wherein the at least one adaptive service policy control agent applies network service policies from a superset profile that provides capabilities from each of the first and second service profiles" ('055 patent, claim 8)

Headwater's Proposed Construction	Samsung's Proposed Construction
Not indefinite; plain and ordinary meaning	Indefinite

The term "wherein the at least one adaptive service policy control agent applies network service policies from a superset profile that provides capabilities from each of the first and second service profiles" in claim 8 of the '055 patent is indefinite because it requires the "adaptive service policy control agent" to perform a function that contradicts the function recited in the independent claim from which it depends. The claims themselves create an irreconcilable ambiguity that the specification fails to remedy.

Dependent claim 8 of the '055 patent recites "[t]he wireless end-user device of claim 1, wherein the at least one adaptive service policy control agent ***applies network service policies from a superset profile that provides capabilities from each of the first and second service profiles***." '055 Pat. at cl. 8 (disputed language emphasized). However, claim 1, from which claim

8 depends, recites "[a] wireless end-user device comprising . . . at least one adaptive service policy control agent to enforce network service policies associated with ***the selected one of the first and second service profiles***." '055 Pat. at cl. 1 (emphasis added). Read together, claims 1 and 8 collectively encompassing the "adaptive service policy control agent" (1) "enforc[ing] network service policies associated with the selected . . . service profile[]" ***and*** (2) "appl[ying] network service policies from a superset profile that provides capabilities from each of the [two] service profiles." Stated differently, claim 8 would suggest that the claimed adaptive service policy control agent apply policies from the selected profile (claim 1) and from both profiles (claim 8). Nothing in the claims or specification describe how any such device would accomplish both, nor do they indicate doing so would be possible. *See Synchronoss Techs., Inc. v. Dropbox, Inc.*, 987 F.3d 1358, 1366-67 (Fed. Cir. 2021) (holding claims indefinite where they "are nonsensical and require an impossibility" and declining to rewrite those claims to preserve validity). Claim 8 is indefinite.

The specification also cannot save this claim. The words "superset profile" appear only twice in the specification. *See* '055 Pat. at 69:4-11 ("The superset profile is the profile that provides the combined capabilities of two or more service profiles when the profiles are applied to the same device 100 service processor. In some embodiments, the device 100 (service processor 115) can determine the superset profile rather than the service controller 122 when more than one "stackable" service is selected by the user or otherwise applied to the device."). Although this portion of the specification might describe in some way what the "superset profile" ***is***, it does not—and cannot—describe how the claimed "adaptive service policy control agent" can apply policies from a single profile (i.e., the "selected profile" as in claim 1) ***and*** from both profiles (claim 8).

Headwater provides only a single-sentence conclusory statement: "The claim language is clear, and the specification fully supports the claimed 'superset profile' that provides capabilities from each of the first and second service profiles." Dkt. 65 at 9. But Headwater fails to expound on (or cite) the actual claim language at issue, let alone provide any explanation as to how the claimed "adaptive service policy control agent" can simultaneously perform contradictory functions. But as discussed above, the only portion of the specification that even mentions the "superset profile" fails to expound on the application of that superset while the adaptive service policy control agent also applies the policies from a single profile.

Accordingly, neither claim 8 nor the '055 patent's specification inform a POSITA with reasonable certainty as to the scope of the claimed invention because it would "require an impossibility." *Synchronoss Techs.*, 987 F.3d at 1366-67 (Fed. Cir. 2021); *Nautilus*, 572 U.S. 898 at 901.

E. "secure modem subsystem" ('429 patent, claim 1)

Headwater's Proposed Construction	Samsung's Proposed Construction
Not indefinite; plain and ordinary meaning	Indefinite

The term "secure modem subsystem" in claim 1 of the '429 patent is indefinite because the intrinsic record fails to inform a POSITA with reasonable certainty as to the scope of the claimed invention. *See Nautilus*, 572 U.S. 898 at 901. In particular, the patent provides no clear definition or objective criteria for what makes a modem subsystem "secure," nor does it offer any objective boundaries or explanation of what constitutes the claimed "subsystem." As a result, the term is ambiguous and fails with reasonable certainty to provide the scope of the claim.

1. The term "secure" lacks objective meaning

The surrounding claim language provides no indication of what makes a modem subsystem "secure." In addition to a "secure modem subsystem," claim 1 also recites a first and second "secure control channel," a "secure execution environment," and a "secure memory partition." Yet the claim language does not specify what characteristics or features render these components "secure." *See* '429 Pat. at cl. 1. Likewise, none of the dependent claims provide any clarification regarding what it means for a modem subsystem—or any other component—to be "secure." *See id*. at cls. 2-12.

The specification similarly fails to provide any meaningful guidance on what it means for a modem subsystem to be "secure." The patent does not include an express definition of "secure," nor does it provide any objective criteria or examples that would clarify the scope of the term. Critically, the phrase "secure modem subsystem" does not appear in the specification. Although the term "secure modem" appears three times, (*see id*. at 2:49-54, 3:3-8, 11:1-4), and "modem subsystem" appears eight times, (*see id*. at 5:3-16, 10:29-31, 11:41-46, 14:14-31), none of these references explain what characteristics render a modem subsystem itself "secure" or how "secure" should be understood to modify the phrase "modem subsystem."

Although the specification provides examples of what it means to be "secure" in other contexts—such as identifying an "encrypted communication link" as a "secure link," (*id*. at 3:63-67), and "encrypted communications" as "secure communications," (*id*. at 10:34-41)—it offers no comparable explanation for the modem subsystem. Headwater's argument that the specification "supports secure modem subsystems" misses the point. *See* Dkt. 65 at 11. The issue is whether the intrinsic record, including the specification, provides sufficient clarity to render the term definite. It does not.

Headwater cites a statement from the specification that a "modem execution partition" can be used to "securely store" device credentials (Dkt. 65 at 11 (citing '429 Pat. at 10:23–29)), but the statement fails to inform what it means with reasonable certainly for a "modem subsystem" itself to be "secure." Likewise, the prosecution history contains no relevant discussion or clarification of what it means for a modem subsystem to be "secure," a point that Headwater does not dispute.

As a result, a POSITA is left without any concrete guidance and must guess at the boundaries of the claim, rendering the term indefinite. *See Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014) ("The claims, when read in light of the specification and the prosecution history, must provide objective boundaries for those of skill in the art.") (citing *Nautilus*, 572 U.S. at 911 n. 8).

2. The term "subsystem" does not provide sufficient objective boundaries to render "secure modem subsystem" definite

Headwater's argument that "subsystem" should simply be understood in its "ordinary sense" as "a system that is part of a larger system" does not resolve the ambiguity of the term "secure modem subsystem." *See* Dkt. 65 at 10.

Independent claim 1 recites a "secure modem subsystem" but provides no indication of which components, features, or functions define it. *See* '429 Pat. at cl. 1. The claim merely identifies the subsystem in broad terms without describing its boundaries, mandatory elements, or distinguishing characteristics. *See id.* As a result, a POSITA is left to guess which configurations or combinations of components would fall within the scope of the claimed "subsystem."

Dependent claims 3 and 4 confirm this ambiguity rather than resolve it. Claim 3 adds that the "secure modem subsystem" comprises "a modem control link and a modem local channel," and claim 4 further adds that it comprises "a modem agent." *See* '429 Pat. at cls. 3, 4. These

dependent claims merely list additional possible components but do not define which elements are required to constitute the subsystem. They fail to establish objective boundaries or a closed set of necessary features that a POSITA could rely on to determine claim scope.

The specification likewise fails to provide meaningful clarification. While it references "modem subsystems" generally (*see id*. at 5:3-16, 10:29-31, 11:41-46, 14:14-31), it does not describe their internal structure, required components, or any criteria distinguishing them from other system elements. References to device assisted services ("DAS") elements and access networks merely describe possible configurations but do not define the metes and bounds of a "modem subsystem" in the context of the claims. *Id*.

Moreover, the figures of the '429 patent compound the confusion. For example, Figure 1 depicts modem subsystem 125 as a component *within* secure execution environment 100. *See id*. at Fig. 1; *see also* Figs. 2-11 (same). This conflicts with the claim language, which treats the "secure modem subsystem" as distinct from the "secure execution environment." *See, e.g., id*. at cl. 1 ("connecting a second secure control channel from a secure execution environment, separately secure from the secure modem subsystem, through the secure modem subsystem and the wireless cellular network to the network service controller"). This inconsistency further prevents a POSITA from determining the scope of the subsystem with reasonable certainty. The prosecution history likewise contains no relevant discussion or clarification regarding the scope of the "secure modem subsystem," which Headwater does not dispute.

Extrinsic evidence, such as the dictionary definition Headwater cites ("subsystem: 'a system that is part of a larger system'"), cannot salvage the term. *See* Dkt. 65 at 10. This definition comes from a contemporary general-purpose dictionary, not a contemporaneous technical dictionary reflecting the understanding of a POSITA. *See Phillips v. AWH Corp.*, 415 F.3d 1303,

1318 (Fed. Cir. 2005) (en banc) ("We have especially noted the help that technical dictionaries may provide to a court to better understand the underlying technology and the way in which one of skill in the art might use the claim terms.") (internal marks omitted). Moreover, Headwater did not disclose its intention to rely on this extrinsic evidence in the parties' Joint Claim Construction and Prehearing Statement. *See* Dkt. 62-1 at 4. For these reasons alone, the Court should give it no weight. In any event, even if considered, the general definition Headwater relies on is overly broad and fails to resolve the specific structural and functional ambiguity inherent in the term as used in the '429 patent.

Thus, even accepting that "subsystem" generally means "a system within a system," neither the intrinsic nor the extrinsic evidence provides a POSITA with reasonable certainty regarding the structural or functional boundaries of the claimed "secure modem subsystem." The patent fails to identify the necessary components, configurations, or distinguishing features that define this subsystem, leaving its scope vague and indeterminate. As a result, claim 1 does not "afford clear notice of what is claimed, thereby apprising the public of what is still open to them." *Nautilus*, 572 U.S. at 909 (quoting *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 373 (1996)) (cleaned up). Accordingly, the term renders claim 1 indefinite.

VI. CONCLUSION

Samsung respectfully requests that the Court find claim 1 of the '510 patent, claim 8 of the '055 patent, and claim 1 of the '429 patent indefinite.

Dated: July 10, 2025

Respectfully submitted,

By: */s/Ashley A. Bolt*

Ruffin B. Cordell
TX Bar No. 04820550
Michael J. McKeon
DC Bar No. 459780
mckeon@fr.com
FISH & RICHARDSON P.C.
1000 Maine Avenue, SW, Ste 1000
Washington, D.C. 20024
Telephone: (202) 783-5070
Facsimile: (202) 783-2331

Thad C. Kodish
GA Bar No. 427603
tkodish@fr.com
Ashley A. Bolt
GA Bar No. 231197
bolt@fr.com
FISH & RICHARDSON P.C.
1180 Peachtree St. NE, 21st Floor
Atlanta, GA 30309
Telephone: (404) 892-5005
Facsimile: (404) 892-5002

Kelly Allenspach Del Dotto
DE Bar No. 5969
kad@fr.com
FISH & RICHARDSON P.C.
222 Delaware Avenue, 17th Floor
Wilmington, DE 19801
Telephone: (302) 652-5070
Facsimile: (302) 652-0607

Melissa R. Smith
State Bar No. 24001351
Melissa@gillamsmithlaw.com
GILLAM & SMITH, LLP
303 South Washington Avenue
Marshall, Texas 75670
Telephone: (903) 934-8450
Facsimile: (903) 934-9257

Jon Hyland
State Bar No. 24046131
jhyland@hilgersgraben.com

Grant K. Schmidt
State Bar No. 24084579
gschmidt@hilgersgraben.com
HILGERS GRABEN PLLC
7859 Walnut Hill Lane, Suite 335
Dallas, Texas 75230
Telephone: (972) 645-3097

ATTORNEYS FOR DEFENDANTS SAMSUNG ELECTRONICS CO., LTD SAMSUNG ELECTRONICS AMERICA, INC.,

CERTIFICATE OF SERVICE

The undersigned hereby certifies that counsel of record who are deemed to have consented to electronic services are being served with a copy of this document via the Court's CM/ECF system per Local Rule CV-5(a)(3) on July 10, 2025.

/s/ Ashley A. Bolt
Ashley A. Bolt